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REVIEWS:

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"Here is the first volume in a projected series designed to provide a medium in which every phase of food research may be exhaustively and critically reviewed on a continuing basis. The rapid and widely spread expansion of food research, in recent years, has brought about a trend toward specialization. And that trend is causing a loss of contact between workers in the various phases of science. A co-ordinating and integrating outlet, such as is represented by this book, has therefore become highly necessary." *Food Industries*

VOLUME II, 1949, xiv, 558 pages, illustrated, $8.80

Ion Exchange Application by the Food Industry. By GEORGE E. FELTON, *Hawaiian Pineapple Company, Honolulu, Hawaii.*

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The Pharmacology of DDT. By ARNOLD J. LEHMAN, *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

Analysis of Foods by Sensory Difference Tests. By MILDRED M. BOGGS and HELEN L. HANSON, *Western Regional Research Laboratory, Albany, California.*

The Chemistry of Fruit and Vegetable Flavors. By JUSTUS G. KIRCHNER, *United States Department of Agriculture Laboratory of Fruit and Vegetable Chemistry, Pasadena, California.*

Histological Changes Induced in Fruits and Vegetables by Processing. By T. ELLIOT WEIER and C. RALPH STOCKING, *University of California, Davis, California.*

The Spoilage of Fish and Its Preservation by Chilling. By G. A. REAY and J. M. SHEWAN, *Torry Research Station, Aberdeen, Scotland.*

Spray Drying of Foods. By EDWARD SELTZER, *Continental Foods, Inc., Thomas Lipton, Inc., Hoboken, New Jersey,* and JAMES T. SETTELMEYER, *Maxwell House Division, General Foods Corporation, Hoboken, New Jersey.*

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Abstracts

(Continued from page 4)

the plant water supply. Part III, Initial fillet contamination is traced to the cutting table, stresses the fact that bacteria are transferred from the surface of the fish through the knives and cutting tables and by the hands of the cutters. If stored fish is washed before cutting, the bacterial count is materially reduced mainly because the fish slime containing most of the bacteria is more easily removed after some storage.

19J. The effects of processing on the vitamin content of meat.

RICE, E. E. *Food Canada*, 9, 46, June, 1949.

Small loss of nutrients occurs in the processing of fresh meat since handling itself necessitates rapidity and temperature near freezing to prevent spoiling. Some niacin is lost in the storage of fresh meat. Riboflavin, thiamine and pantothenic acid are retained almost 100%. Prolonged holding increases riboflavin and pantothenic values. Meats cured in brine lose some vitamins by leaching. Packaging meat in cans or casing of some sort before thermal processing prevents loss of heat labile nutrients. At the higher temperatures of sterilizing canned meats, the destruction of thiamine is quite apparent. Loss of thiamine is proportioned to the amount and duration of heat used. Losses of pantothenic acid, pyridoxine and folic acid parallel those of thiamine.

20J. Initial physical and chemical changes in beef as related to tenderness.

RAMSBOTTOM, J. M., AND STRANDINE, E. J. *J. Animal Sci.*, *8*, 398-410 (1949).

A study was made to develop information on the initial tenderness of beef and to determine the relationship of some physical, chemical, and histological changes in the beef to changes in tenderness during a 12 day period following slaughter. Experiments were made on ten beef carcasses which ranged in quality from common to choice. Objective and subjective measurements of tenderness showed that beef which was chilled in carcass form was more tender than beef which was boned and then chilled to 35° F. Beef was found to be more tender at 2 hours following slaughter than at any time thereafter for the next 2 to 6 days. By the twelfth day following slaughter, beef which was stored at 35° F. was considerably more tender than it was at 2 hours after slaughter. Beef which was frozen 2 hours following slaughter was lighter in color in the frozen state and darker in the thawed state than beef which was chilled for 24 hours or more before freezing. Photomicrographs show that marked changes occurred in the histological characteristics of the muscle fibers. These changes were correlated with changes in the tenderness of the beef.

21J. Consumer response to prepackaged fresh meats.

KRAMER, R. C. Mich. Agr. Exp. Sta. Quarterly *Bulletin 32*, 12-16, Aug., 1949.

On April 1, 1949, there were about 878 meat stores that were 100% self-service, and it is estimated that there will be approximately 1,500 stores in the U. S. completely converted to 100%

(Continued on page 9 following technical papers)

self-service by the end of 1949. A survey in one store of 330 shoppers who have used 100% self-service revealed that they principally liked it because the weight and total price are given, they can shop quicker and they can examine the meat. Further studies are needed on the technical and the economic problems of prepackaging both fresh and frozen meats. Frozen prepackaged meat still is of little significance.

PECTIN

22J. Pectins of definite combining weights from pectins of high combining weights.

PALLMANN, H., DEUEL, H., AND EICKENBERGER, E. *Swiss*, *223*, 170, Oct. 2, 1944; *C. A. 43*, 4398ª (1949).

The pectin is submitted to a saponification reaction with alkali. The reaction can be controlled to give products of desired molecular weight or characteristics by the amount of alkali used, control of the temperature, or by stopping the reaction with acid.

(Continued on page 9 following technical papers)

Abstracts

(Continued from page 8 preceding technical papers)

TASTE TESTING

23J. Organoleptic tests in the food industry.
GREEN, G. H. *Chem. & Ind.*, 567, Aug. 6, 1949.

Referring to a recent paper by Bate-Smith (*J. Soc. Chem. Ind., 68*, 78 (1949) it is suggested that the difficulty of assessing food quality by points scoring may be overcome by taking the product of the individual scores (geometric summation) in place of the sum (arithmetic summation).

24J. Quality in fresh cod fillets as determined by taste panel.
DYER, W. J. *Food Canada, 9*, 18-24, May, 1949.

Correlation of the palatability with chemical determination of trimethylamine content of the fish and organoleptic examination of raw fish resulted from surveys of the quality of fish in retail stores. Tests showed that aging of fish does not increase palatability as with meat; quality is steadily lowered during storage; even before spoilage tastes or odors become noticeable, the palatability is reduced to 60% of that of fresh fish. Fresh fish becomes unacceptable after 3 days storage at household refrigeration temperatures. Fish rated as "good" or "perfect" had a trimethylamine value of less than 1 mg. N/100 g., "spoiled," 15 to 30 mg. and over. The survey showed that much of the fish reaching the consumer is of "borderline quality" or worse.

VEGETABLES

25J. Effects of storage on starch and sugars contents of Maine potatoes.
TREADWAY, R. H., WALSH, M. D., AND OSBORNE, M. F. *Am. Potato J., 26*, 33-43 (1949).

Experimental data have shown that when potatoes are stored at low temperatures (35° F. to 40° F.) there is a decrease in starch content and a corresponding increase in the sugar content. The amount of change in starch or sugar content is dependent on variety, temperature, and length of storage. When potatoes are removed from cold storage to normal storage, the starch and sugar contents are increased. Commercial starch produced from stored potatoes had essentially the quality as that from freshly harvested potatoes.

ELECTRONIC SCALE

An electronic livestock scale which weighs quickly and acurately has been developed by an aircraft corporation under the direction of the Production and Marketing Administration of the U. S. Department of Agriculture, according to that agency's August 1949 Marketing Activities. Employing electronic principles rather than mechanical principles, the scale automatically registers weights on a large dial and prints them on a ticket with the push of a button. This new, accurate, automatic, virtually fool-proof and tamper-proof scale offers possibilities for use in the fishing industry, or any industry requiring large-scale weighings, since it is not affected by dirt, rust, or moisture.

The electronic scale virtually eliminates the shortcomings of the lever-type scale. The heart of the new development—the strain-gage cell with electronic indicator—had been designed previously by the aircraft corporation. Four of the compact cells are placed under the corners of a conventional platform. Each cell electronically transmits its pressure impulse through an electric cable encased in a flexible rubber-covered conduit. The measure of the pressure on the cells is translated into the recorded weight in an indicator unit, and registered on a 16-inch dial with two concentric graduated circles, the smaller divided plainly at thousand-pound intervals to a capacity of 32,000 pounds, and the larger circle graduated in 5-pound intervals to 1,000 pounds capacity. Two indicator hands, corresponding to the hands of a time clock, combine to register a total that is clearly visible up to distances of at least 10 feet. On the lower section of the indicator assembly are red and green signal lights which show whether the unit is in operation or locked for printing.

On the printer, the third element of the assembly, a series of keys controls a set of type wheels arranged to record the number and species of animals weighed, as well as the initials of the selling agency. This unit is electrically connected to the indicator and it prints simultaneously: the registered weight on the dial, the species and number of animals weighed, and the month, day, hour, and minute in which the weighing is performed. Depending upon the size of the load, the weight value is indicated in two to seven seconds.

Time required for installation is but a fraction of that required for the normal lever-type scale. In the new device, the general compactness and the flexibility of coupling between the cells and the indicator unit establish such a degree of adaptability that the entire mechanism can be installed in approximately one hour where a lever system scale is replaced. All parts are replaceable as units, so that "trouble shooting" and repair are distinctly simplified. Commercial installation of the new scale was expected to begin in September.—*Commercial Fisheries Review*. October, 1949.

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News of the Institute

(Continued from page 3 preceding technical papers)

if, in his opinion, the applicant qualifies for membership the payment to accompany the application will be $7.50. If qualified for affiliate the payment to be $5.00. In the event an applicant qualifies for a lower status, or the application is rejected, the Secretary's office will make prompt refund.

3. It was moved, seconded and carried that the signature of the Executive Secretary only appear on membership cards.

4. It was moved, seconded and carried that the following procedure be followed with regard to membership beginning during any calendar year: When the applicant has been elected to membership and payment received, begin the subscription of the Journal with the next issue. Credit the member's account in the case of members with 63c per month for the remaining months of the calendar year, and credit the balance of the payment to his account for the following year, in which case billing for the following year will be less the payment credited. In the case of affiliates, credit will be 42c per month for the remaining months of the current year, and for student members 21c per month.

5. It was moved, seconded and carried that the Executive Secretary publish a financial statement of the Institute in the January or February issue of the Journal each year.

6. It was moved, seconded and carried that when membership dues are not paid by January 1st that a second notice be sent to the delinquent member, and that his subscription to the Journal be stopped until such time as payment is received. If payment is received after the stopping of a subscription, back issues of the Journal will be furnished only at the current sales price. Even though subscriptions are stopped a member's name will not be dropped from the rolls until every reasonable effort has been made to collect his dues.

7. It was moved, seconded and carried that the Secretary's office furnish stationery and postage to the various committees in reasonable amounts; that no payment will be made for bills contracted by committees for special stationery.

8. It was moved, seconded and carried that the Secretary's office from time to time furnish lists of deceased and delinquent members to the Secretaries of the various Regional Sections.

9. It was moved, seconded and carried that the Executive Secretary send a copy of the proceedings of this meeting to all councilors and officers of the Institute.

10. It was moved, seconded and carried that the Executive Secretary be instructed to furnish no mailing lists to other organizations, and to restrict the distribution of the Directory of the Institute to members. The Executive Secretary was further instructed to charge for addressing and mailing material for other organizations at current prevailing prices for this service, except in the case of advertisers in FOOD TECHNOLOGY, who will be furnished this mailing service at actual cost.

11. It was moved, seconded and carried that actual expenses of various committees be approved, not to exceed the following amounts:

Publicity Committee (including amounts already spent)	$400.00
Program Committee	200.00
Employment Committee's actual expenses, not to exceed	100.00

12. It was moved, seconded and carried that the Journal publish tentative programs, and the complete program for annual meetings, and other material submitted by the Publicity Committee, all releases to be submitted to the Editor through the office of the Executive Secretary.

13. It was moved, seconded and carried that the President submit reports of Committes to the Editorial Board for publication in the Journal, these reports to be published in their entirety or abbreviated as the Editorial Board deems best. However, such reports are not to be published until cleared by the Council or its Executive Committee.

14. It was moved, seconded and carried that no Council meeting be held in Atlantic City in January.

15. It was moved, seconded and carried that the Executive Secretary compile the changes in the Constitution necessary to effect incorporation, and to confer with Councilor W. L. Campbell regarding the advisability of incorporation, and report results to the Executive Committee. This action is taken because the Legal Department of the Institute's bank and a corporation attorney have stated that incorporation is a necessary measure to protect the members of the Institute, either individually or collectively, from liability for actions of the Institute.

16. It was moved, seconded and carried that the Executive Secretary confer with the Chairman of the Membership Committee for the preparation of a brochure describing the Institute, and if such a brochure can be published at a cost of $300.00 or less, to proceed with its publication.

17. It was moved, seconded and carried that the Executive Secretary be directed to mail new members a copy of the Constitution of the Institute when these are available.

18. It was moved, seconded and carried that the Regional Section Committee be requested to prepare a new listing of the boundaries of Regional Sections.

19. Because of numerous expressions of apprehension from members, the Executive Committee feels that the Great Lakes Section should carefully review the advisability of holding the 1952 meeting at Mackinac Island. The fear has been expressed that exhibitors would be loath to send their exhibits to this location, and many members feel that it would be difficult to obtain authorization for travel to Mackinac Island for a meeting.

20. The Executive Committee tentatively accepted the invitation of the Southern California Section for the annual meeting in Los Angeles in 1954.

21. After discussing sustaining members, it was decided not to take any action on this matter at the present time.

22. It was moved, seconded and carried that the following resolution be submitted to the entire Council for vote by mail:

a. RESOLVED, That the Executive Committee of the Council shall be composed of five Council members, no two of which shall be from the same Regional Section. The five members of the Executive Committee shall be elected from the active members of the Council by the following procedure: At the annual meeting the President-elect shall appoint a Nominating Committee of five Council members, no two of which shall be from the same Regional Section. The Nominating Committee shall meet prior to the close of the Annual meeting, and shall select from the list of active Council members a slate of not less than seven and not more than ten, no two of which shall be from the same Regional Section. The Nominating Committee shall present to the Executive Secretary the names of the individuals nominated, and the Executive Secretary will then send to each member of the new Council an informal ballot requesting that each Councilor vote for five of the nominees. The five who have received the highest number of votes three weeks after the mailing of the ballot shall be notified that they are members of the Executive Committee of the Council.

b. The duties of the Executive Committee of the Council shall be to act for the Council in matters requiring action during the interval between Council meetings, and at the request of the President to confer and advise with him and other officers of the Institute on any matter requiring consideration or executive action. Such interim action as may be authorized by the Executive Committee to be brought to the attention of the Council at its next regular meeting for its information and for ratification, except that for matters that the Council at one of its meetings may refer to the Executive Committee for final action shall not require subsequent Council approval.

c. The five elected Committee members shall continue in office for one year, or until the succeeding Executive Committee shall be declared elected.

d. A member of the Executive Committee may be elected to succeed himself on the Committee, provided he continues as a member of the Council.

23. It was moved, seconded and carried that the Executive Secretary be directed to study the matter of issuing members certificates of membership, and to determine the cost thereof, reporting the results of this investigation to the Council at its next meeting.

CHARLES S. LAWRENCE
Executive Secretary

1950 IFT CONFERENCE

The committee organization for the 1950 IFT Conference in Chicago is as follows:

National Program Committee: Chairman, Lloyd A. Hall, Griffith Laboratories, 1415 W. 37th St., Chicago 9.

National Publicity Committee: Chairman, Milton E. Parker, Illinois Tech, 3300 S. Federal St., Chicago 16.

Local Arrangements: Chairman, C. L. Smith, Continental Can, 4645 W. Grand Ave., Chicago 39. Vice-Chairman, R. A. Isker, Pilgrim Advertising, 222 W. Adams St., Chicago 3.

Courtesy: Chairman, W. V. Shannon, Oscar Mayer & Co., Madison 1, Wis. George W. Beach, R. W. Bates, W. F. Bronson, E. V. Cassady, Weld Conley, H. W. Conner, V. J. Del Guidice, E. F. Glabe, O. C. Hartmann, J. W. Holmquist, W. J. Imig, O. C. Johnson, J. N. Lesparre, P. P. Noznick, R. J. Remaley, J. B. Rolle, Randall Royce, E. H. Ruyle, E. M. Schoenfeld, Elsie Singruen, Mardell Tompkins, V. S. Troy.

Registration: Chairman, R. D. Trelease, Swift & Co., USY, Chicago 9. J. N. Czarnecki, L. W. Horne, H. S. Mitchell, J. J. Vollertsen, L. A. Wright.

Entertainment: Chairman, M. L. Laing, Armour & Co., USY, Chicago 9. G. M. Chapman, J. W. Kellogg, A. E. Maren, G. B. Perlstein, F. N. Peters.

Ladies Entertainment, Sub-Committee: Chairman, Dorothy A. Huber, QMF&CI, 1849 W. Pershing Rd., Chicago 9 . Alice Amis, Mignon Gill, Frances Hemphill, Margaret Ives, Catherine Walliker.

Exhibits: Chairman, L. E. Clifcorn, Continental Can, 4645 W. Grand Ave., Chicago 39. J. H. Bunting, R. H. Ingham, G. T. Peterson, D. J. Wessel.

Field Trips and Transportation: Chairman, V. O. Wodicka, Libby, McNeill & Libby, Blue Island, Ill. C. G. Barton, L. E. Jackson, J. S. Kujawski, A. E. Mudra, W. J. Mutschler.

Finance: Chairman, R. M. Schaffner, Libby, McNeill & Libby, USY, Chicago 9. G. E. Brissey, E. W. Hopkins, D. E. Perham, B. M. Shinn.

Hotel Arrangements: Chairman, E. S. Stateler, Food Industries, 520 N. Michigan Ave., Chicago 10. R. D. Baxter, F. D. Buchanan, A. A. Kiess, L. P. Martens.

Publicity and Printing: Chairman, R. A. Stegeman, QMF&CI, 1849 W. Pershing Rd., Chicago 9. Armen Adajian, H. F. Clew, G. A. Crapple, R. A. Klein, G. E. Siebel, R. I. Tenney, C. K. Wiesman.

National Program Committee Chairman Lloyd Hall has already made considerable progress in arranging a program for the Conference, having convened his committee during the fall A. C. S. meeting in Atlantic City. Lloyd is saving the details for the February issue of *The Vitalizer*, house organ of the Chicago Section, which will be given national distribution. He promises a program designed to attract a record attendance.

NEW REGIONAL SECTION?

It is rumored that a group of food technologists in the region of Raleigh and Richmond, Virginia-Carolina, have already had two meetings and are hoping to form a new Regional Section of IFT.

PLANT SANITATION PANEL

A transcript of the panel discussion on plant sanitation which was held at the Ninth Annual IFT Convention in San Francisco was published in the November, 1949 issue of *Modern Sanitation;* starting on page 31.

Regional Section News

CHICAGO SECTION

At the October 1949 meeting of the Chicago Section, Colonel Paul P. Logan, Director of Research, National Restaurant Association, spoke on the subject of "Food Technology Applied to the Public Feeding Industry."

On November 21, members of the Chicago Section met at the plant of the Schlitz Brewery Co. in Milwaukee, Wisconsin, where there was an opportunity to inspect the operations of brewing and bottling of beer. A "spread" provided by courtesy of the Schlitz management was enjoyed at 6 p. m. The speaker of the evening was Mr. M. D. Sanders, in charge of the Chemical Engineering Division, Swift & Co. Research Laboratories. Mr. Sanders' topic was "Water and Industrial Waste in the Food Industries."

Analysis of the 1949 IFT membership in Cook County, Ill., as representative of the Chicago Section, shows that the membership represents a total of somewhat more than 155 different organizations. This means a job well done on the part of the Membership Committee in interesting technologists in most of the food processing or distributing organizations in the Chicago

area. Of these organizations, however, the majority include less than seven IFT members each, and only six include from 20 to 30 IFT members each. Hence there is still a fertile field for recruiting in companies not now represented in the Section and in the companies having only a small number of IFT members.

Dr. John M. Jackson, formerly Assistant Chief of the Packaging Research Section, American Can Co., Maywood, Ill., was transferred on June 1, 1949, to the West Coast to become Assistant Manager of Research for the Pacific Division of the American Can Company, with headquarters in San Francisco, California. While en route by automobile to assume this position, he was involved in a serious accident in Omaha, Nebraska, which necessitated a hospital sojourn. Happily he has now recovered to the point where he is convalescing at home. Dr. Jackson was Secretary of the Chicago Section from 1946 through 1949 until he resigned upon leaving for California. It is hoped that his recovery will soon be complete.

Dr. William J. Shannon, of Oscar Mayer & Co., Madison, Wisconsin, and Chicago, Ill., addressed the graduating class of the Wisconsin Medical School in the fall of 1949. His topic was "The Importance of Federal Meat Inspection to Public Health."

Elsie Singruen, Technical Consultant of Chicago, was one of the speakers at the Industrial Waste Conference at Purdue University on November 29-30. Her topic was "The Utilization of Brewers Yeast."

Chicago Section members who appeared as guest speakers at the Dairy and Food Technologists and Sanitarians Conference, University of Illinois, November 1-2, included A. I. Kegan (Kegan and Kegan), M. L. Laing (Armour), and H. D. Lightbody (QM Food & Container Institute).

C. E. Maier (Continental Can) has been made general manager of research. Mr. Maier was previously assistant to the vice-president in charge of research and engineering.

The recent election of officers of the Chicago Chemists Club for the 1949-50 term resulted in the selection of James D. Ingle (Swift & Co.) as president and G. T. Peterson (Continental Can) as treasurer.

Among those responsible for the success of the American Oil Chemists' Society annual fall meeting, recently concluded at the Edgewater Beach Hotel, were: H. T. Spannuth (Wilson & Co.), program chairman; R. W. Bates (Armour & Co.), trip chairman; K. F. Mattil and V. C. Mehlenbacher (both of Swift & Co.), session chairmen. Mehlenbacher, incidentally, is president of the Society.

James H. Bunting, Technologist (Campbell Soup), has been transferred to the home office in Camden, N. J., to enter Product Research. Mr. Bunting will be replaced at the Chicago Campbell Soup plant by O. C. Wagner, formerly assistant staff technologist at the Camden plant.

Fred W. Tanner is on leave from the University of Illinois and is now located in Florida. He expects this to be a permanent move. His present address is 921 Lincoln Circle, Winter Park, Fla.

William M. Fosdick, of Armour & Co., Chicago, has left the Yards in favor of Birmingham, Ala., where he is General Sales Supervisor for southeast U. S. on veal, lamb, and frosted meats.

The next issue of *The Vitalizer* will appear in February, 1950. This issue will contain advance programs for the 1950 IFT Conference and will have national distribution.

GREAT LAKES SECTION

The Great Lakes Section's Fall Meeting was held November 4 at Battle Creek. Battle Creek's fine hospitality was keenly felt by all attending. Plant tours were conducted through (1) The W. K. Kellogg Co. (2) Post Cereals Div. of General Foods, and (3) The Michigan Carton Co., largest and newest paper board mills for food industry cartons in the world.

More than 100 members and guests participated in the plant tours, together with the afternoon session which was held at The Battle Creek Country Club.

The executive committee met with Chairman Roy E. Marshall at noon to discuss (1) methods of getting new section members, (2) increasing our section's councillors to the National Institute from 1 to 2 as permitted by our qualified membership of more than 100, (3) the 1952 meeting to be held at Mackinac Island, Grand Rapids or other suitable spot as determined by a poll of sections and exhibitors by R. B. Wakefield's committee.

The afternoon session which began at 2:00 P. M. included the following papers:

The use of dehydroacetic acid as a microbiological stabilizer for foods, by Dr. Paul A. Wolf, Dow Chemical Co.
Stock feeds and animal nutrition by Mr. Max Cooley, General Mills, Larrowe Div., Toledo, Ohio.
Progress in quality of infant-food, by Dr. W. L. Thompson.
Discussion of food sanitation problems, Dr. F. W. Fabian, discussion leader.
Business session and recess followed.
Dinner at 6:30 P. M. Evening speaker at 7:30 P. M. was Mr. Charles W. Kaufman, General Foods Corp., who spoke on frozen orange juice concentrate development.

The Winter Meeting will be held January 20, 1950, 2:00 P. M. at the Sheraton Hotel, Detroit, Michigan.

NORTHEAST SECTION

Members of the Northeast Section met on December 1, 1949, at Northeastern University, Boston, Mass. Speakers of the evening and their topics were as follows:

Mr. I. Claude Shea, Seven-Up Bottling Co., Boston, Mass. Topic: "Carbonated Beverages."

Mr. W. O. Brockert, Executive Vice-President, Croft Brewing Co., Boston, Mass. Topic: "Malt Beverages."

Mr. Marron W. Fort, General Manager of A. & G. S. Caldwell, Inc., Newburyport, Mass. Topic: "Distilled Beverages."

New members who joined the Northeast Section in the fall of 1949 include:

J. Angeline, A. D. Little, Inc., Cambridge, Mass.
C. Angell, Artisan Metal Co., Boston, Mass.
H. P. Bowra, Fritzsche Bros., Inc., Boston, Mass.
Anthony Corrente. E. L. Patch & Co., Boston, Mass.
J. S. Getchell, Maine Agric. Expt. Sta., Orono, Maine.

Mrs. Jean Murray Gainer, Dept. Food Tech., M. I. T.
R. L. Keenan, Waltham, Mass.
M. P. McArdle, Boston, Mass.
W. A. McKinney, J. O. Welch Co., Cambridge, Mass.
J. O'Brien, E. M. Noel Co., Boston, Mass.
V. Otto, A. D. Little, Inc., Cambridge, Mass.
H. Petreault, J. P. Squire Co., Boston, Mass.
Robert Poling, Boston, Mass.
G. A. Rice, Waltham, Mass.
L. M. Richardson, Lever Bros. Co., Cambridge, Mass.
M. Selby, MacDonald Laboratories, Boston, Mass.
L. Shipman, Minute Tapioca Co., Orange, Mass.
H. B. Swett, U. S. D. A., Boston, Mass.
R. E. Watson, Calgon Inc., Boston, Mass.
M. Wilmer, A. D. Little, Inc., Cambridge, Mass.
Milton Wolf, A. Wolf & Sons, Boston, Mass.

Students in Department of Food Technology, Massachusetts Institute of Technology, Cambridge, Mass.:

D. S. Bhatia
F. Bronner
M. Feingold
Miss O. Hammerle
N. L. Lahiry
D. Lang
J. P. O'Meara
H. V. Shuster
J. A. Stern

Professor B. E. Proctor, Director of the Food Technology Laboratories, Massachusetts Institute of Technology, is the Chairman-Elect of the Division of Agricultural and Food Chemistry, American Chemical Society, and the Chairman of the Program Committee of this Division for 1950.

OHIO VALLEY SECTION

The first meeting of the Ohio Valley Section of the Institute of Food Technologists was held at the Hotel Gibson, Cincinnati, Ohio, on October 8, 1949. (The Ohio Valley Association of Food Technologists was granted a sectional charter at the annual convention of the Institute last summer in San Francisco.)

The afternoon program was composed of the following papers:

"Application of the Principles of Statistical Control to the Manufacture of Glass Containers"—Fred Dellwo, Ball Bros. Co.

"A Review of the Applications of Fats and Oils in the Food Industries"—F. J. Coughlin, The Proctor & Gamble Co.

"What Management Expects from the Food Technologist"—S. M. Blakemore.

"Highlights of the I. F. T. San Francisco Meeting"—George Garnatz, The Kroger Co.

A business meeting followed the technical session. The results of the election of councilors were announced, which completed our executive committee. This committee is composed of:

Section Chairman—N. H. Volle.
Section Vice Chairman—H. D. Brown.
Secretary-Treasurer—D. J. Ridenour.
Section Councilor—Dan McCoy.
Executive Committeemen—Two-year term—A. J. Glazier, R. A. Wait; One-year term—R. B. McKinnis, F. D. Deatherage.
Section Membership Chairman—Fred Dellwo.

Winter Meeting to be hold in Columbus, Ohio, on February 11 or February 18, 1950.

A fine dinner followed the business session, after which Mr. Edward B. Evans spoke concerning "What the Food Technologist Should Know About the Patent System."

SOUTHERN CALIFORNIA SECTION

On November 18, members of the Southern California Section met for a field trip, dinner, and scientific program at the Swift & Co. Los Angeles Refinery. During the afternoon there were field trips through the plant. In the evening, following dinner, the members were addressed by Mr. T. C. Bond, Chief Chemist of Swift's Zone Laboratory in Los Angeles. His topic was "Quality Control in Swift and Company Zone Laboratories." Earl C. Rasmussen, Chemist at Armour & Co., was the discussion leader of the evening.

In September, 1949, the Southern California Section joined the ranks of those Regional Sections who are now publishing monthly news bulletins regarding section activities. The editor of the "IFT Monthly Bulletin, Southern California Section" is R. G. Rice, Fruit & Vegetable Chemical Laboratory, 263 S. Chester Ave., Pasadena 5. The Meeting Reporter is M. G. Morehouse, Department of Biochemistry and Nutrition, University of Southern California. The Field Reporter is Reed Sutherland, Bireley's, 1127 N. Mansfield Ave., Hollywood.

At the October 1949 meeting, it was reported that members of the Section will be present on Station KFI-TV "Report to Mrs. America" (3:15-3:30 p. m.) on the third Thursday of each month. Rolly Langley is in charge of the program. Miss Sara N. Blangsted, Chief Chemist, Mission Dry Corporation, appeared over television on October 6 as the guest star and described her work as chief chemist. Mr. W. C. Cole, Research Director of the Arden Farms Co., was the guest on October 27 and demonstrated the method of fat analysis of ice cream.

The following meeting schedule has been planned by the Section:

January 13, 1950. Field Trip. Helm's Bakery, lunch at Helm's at 12:30 p. m. Luncheon speaker, Paul Helms, Jr.
February, 1950. Fourth Annual Meeting (all day).
March 17, 1950. Field trip, U. S. D. A., Fruit and Vegetable Chemical Laboratory, 1:30 p. m. Dinner at a Pasadena hotel. Dinner speaker, M. J. Copley, Director, Western Regional Research Laboratory.
April 19, 1950. Dinner meeting. A. A. Dickerman, Attorney General Counsel's office, Federal Security Agency, Washington, D. C. Subject: "The Lawyer and the Food Technologist."
May, 1950. Open.

The following new members have been added to the Section:

Eldon K. Bacon, Biochemist with Van Camp Sea Food Co.
J. J. Carlin, Technical Sales, Dow Chemical Co.
Bruce L. Durling, Sales, Wm. J. Stange.
Kenneth F. Gibsen, Chemist, Kelco Co., San Diego.
Edgar J. Kelly, Chem. Eng., C. E. Howard & Co.
Norman E. Kern, Sales, Central Scientific.
Thomas M. Lukes, Microbiologist, Real Gold Citrus Products.
R. W. Mojonnier, Sales Engineer, Mojonnier Bros. Co.
Helen M. Pariseau, Dietitian, Birmingham General Hospital.
R. R. Pitcher, Chemist, Real Gold Citrus Co.

Robert S. Roe, U. S. Food & Drug.
Jula A. Samuely, General Mgr., Live Food Products Co.
C. B. Stevenson, Chem. Eng., Coast Fishing Co.
Henry Tranmal, Bacteriologist, Arden Farms Co.
E. L. Vandercook, Business Mgr., El Molino Mills.

ST. LOUIS SECTION

On September 9, 1949, members of the St. Louis Section met at the plant of Anheuser-Busch, where they heard short talks on recent developments of barley, milling, and feeds by speakers from Anheuser-Busch, Pillsbury Mills, and Ralston Purina Co., respectively.

On October 13, 1949, there was a meeting at the oleomargarine plant of Blanton & Co. Dr. Lanier, Technical Director, gave an abstract of operations, and members then made a tour of the plant.

On November 22, 1949, a meeting was held at the St. Louis College Pharmacy. Mr. H. E. Wiedemann, St. Louis Consulting Forensic Chemist, spoke on court experiences, food contamination, poisons, and patent cases.

NEW YORK SECTION

The first fall meeting of the New York Section opened with a dinner at the Stonewall Inn on October 19, 1949. Dr. T. A. White, Chief Chemist of National Starch Products, Inc., discussed the different types of starch used in food manufacture and emphasized practical applications for optimum results.

The keynote of the meeting on November 16, 1949, was centered in biological problems confronting the food technologist in his daily work. There were three speakers, as follows:

Dr. Robert P. Myers, Director of Microbiological Research, National Dairy Research Laboratory. Topic: "Some Microbiological Problems in the Dairy Industry."

Donald H. Warren, in charge of quality control, Continental Foods. Topic: "Bacteriological Problems in Some Dried Foods."

Dr. C. Olin Ball, specialist in food technology, Rutgers University, and Editor of *Food Technology*. Topic: "Sanitation and Sterilization in Canning."

Miss Alice Wilson of *Food Industries*, who became Mrs. Stanley F. Merritt in September, 1949, is the local Publicity Committee Chairman of the New York Section for the current year. This is the first time the New York Section has had a Publicity Committee, and the Section has chosen well in its selection of the first chairman.

J. H. Nair, of Continental Foods, Inc., addressed food technologists in the Virginia-Carolina section in Raleigh on November 28, 1949. His subject was "Art versus Science in Food Technology."

Frank K. Lawler, editor of *Food Industries*, addressed the Chemical Enginers Club of Washington at a public meeting held in the Jefferson Memorial Auditorium of the U. S. Department of Agriculture, on November 9, 1949. He explained the rôle of the food technologist in industry, stressed the need for more technologists and engineering minds in the food processing industries, and emphasized that the provision of agricultural "know-how" to backward countries must be accompanied by knowledge of processing and storage of food.

On January 18, 1950, members of the Section heard a talk on "Developments in Nutrition" by Dr. R. S. Goodheart of the National Vitamin Foundation.

The 1951 Annual IFT meeting is scheduled to be held in New York in June, at the Hotel New Yorker. Co-Chairmen of this meeting are:

Stephen L. Galvin, Huron Milling Co.
John H. Nair, Continental Foods, Inc.

A new "Food Law Institute, Inc." was launched at a dinner ceremony at the Waldorf-Astoria on November 16, 1949. This is a non-profit organization formed by executives in the food industry and supported by contributions from several large food companies. Charles Wesley Dunn, President of the Institute, has announced that the objective of the Institute is to "develop post-graduate instruction and research in food law at university schools of law." A minimum annual income of $50,000 has been planned, to accomplish this objective. The first major activity of the Institute was the establishment last September of two courses in food law at the New York University Graduate School of Law, which was given a grant of $35,000 for instruction and research studies in the current academic year. The law schools of the universities of California, Washington, and Minnesota have expressed interest in such courses. The Harvard Graduate School of Business Administration has agreed to cooperate in the Institute's program, beginning with a series of introductory lectures in 1950.

PHILADELPHIA SECTION

In November 16, 1949, the Philadelphia Section of IFT held a joint meeting with the American Association of Candy Technologists at Community College, Temple University. The program was a symposium on "Plant Sanitation." The speakers and their topics were as follows:

Dr. Harold G. Lederer, Director of Biological Research, R. M. Hollingshead Corp., Camden, N. J. Topic: "Sanitary Chemicals."

Fred B. Jacobson, Plant Entomologist and Sanitarian, Stephen F. Whitman and Sons, Inc., Philadelphia. Topic: "Plant Sanitation."

Robert C. Stanfill, Chief, Philadelphia District, U. S. Food and Drug Administration. Topic: "Sanitation With Reference to Federal Regulations."

Hans F. Dresel of the Felton Chemical Co., Brooklyn, N. Y., served as moderator at this symposium.

Professor Walter L. Obold of the Drexel Institute of Technology is the local representative of the Philadelphia Section on the national IFT Employment Committee.

Walter Maclinn, Chairman of the Department of Food Technology at Rutgers University, is supervising a program of research and instruction. Principal research problems relate to prolonging the life of fresh foods after they have been harvested or slaughtered.

C. Olin Ball, editor of *Food Technology*, is now Professor of Food Technology at Rutgers University. Frank Halleck, Bruce Morgan, Albert Sheinfeld, Miss Eugenia Orthey, and Mrs. Elizabeth Stier are graduate students. Mr. Melvin Frank is Operating Engineer and Miss Roberta Hucks is Chemist.

G. Victor Hallman, Director of Research, Campbell Soup Co., Camden, N. J., has recovered from a siege of illness suffered in the fall of 1949 and is now back at work.

Oscar C. Wagner, also of the Campbell Soup Company in Camden, N. J., has been transferred to the Chicago plant to assume the duties of technologist.

James J. Spartales, of the Campbell Soup Company's Camden plant, has left the Control Laboratory for the Products Research Department.

E. Everett Meschter has been elected a Councilor to serve on the IFT Council Executive Committee.

MARYLAND SECTION

On November 11, 1949, the Maryland Section met first at the new laboratories of Strasburger and Siegel, Baltimore, for cocktails. A dinner and business meeting were then held at the Hotel Stafford. Following the business meeting, Dr. H. H. Mottern, Director of Research, H. J. Heinz Company, Pittsburgh, spoke on "Inside Lycopersicon." Sound movies and colored slides were shown during the address.

AMES SECTION

On November 18, 1949, the Ames Section met at Memorial Union in Ames for a dinner meeting. Following dinner, there were two speakers:

Mr. George Sheehe, Agricultural Representative for Iowa's Chain Stores Council. Subject: "Consumer Food Preferences."

Dr. Ralph Baker, Economics Department, Iowa State College. Subject: "The Producer's Share of the Consumer's Food Dollar."

CROP NEWS

Output for the crop year 1948-49 has been good in the Northern Hemisphere, but is below the particularly favorable level of the previous season.

Taking each major commodity in turn, the world situation is tentatively found to be as follows: *Wheat* is down from last year by about 3 percent but is 9 percent above prewar. *Rye* is unchanged from last year. The world *rice* crop may be somewhat smaller, owing to slightly less favorable weather conditions. *Maize*, despite a very favorable early showing in North America, which produces nearly two-thirds of the total crop, is down for the world as a whole as much as 8 percent from last year. *Potato* production is much reduced (22% below last year) because of a dry summer in both Europe and North America and a smaller area planted on the latter continent. The *sugar* crop is expected to be about equal to last year's, with an increase in European production and some decline in the major production for export (such as that of Cuba). *Livestock* production has made a strong upturn in Europe and North and Central America and is increasing in Australia and New Zealand. Although crops are below last year's, stocks on hand are much larger in the United States and Canada and are sufficient to provide an ample margin for the importing countries.

World totals are subject to modification, depending on the outcome of the crops now beginning to be harvested in the Southern Hemisphere. Present indications are for a good crop in Australia, with excellent yields of wheat, barley, and oats in all areas except part of the south and west where more rain is needed. In Argentina the area planted to wheat is estimated to be half a million hectares above last year's, and weather conditions so far have not been unfavorable. In the Union of South Africa, where dry weather has continued for a long period of time, wheat output is expected to be normal and maize production is not likely to be as low as last year's poor crop.

In rice-producing countries, Japan reports a record crop and Thailand has prospects of increasing its crop by nearly a million tons over that of the previous season. Despite floods in certain areas, crop conditions are generally satisfactory in India. A reduced rice production is expected in such major rice-exporting countries as Burma, where the area planted has been reduced by about 20 percent from last year.

The Northern Hemisphere countries have largely completed their fall sowing, which took place under particularly favorable conditions in most areas. A few countries in Europe indicate a lack of soil moisture because of the dryness of the past summer. One factor that may considerably affect acreage seeded and crop output is the planned reduction in acreage by the United States. Although final decisions have not been taken, it is expected that the area planted to wheat will not exceed 30 million hectares, a reduction of 3 million hectares from last year's. Areas in maize, cotton, potatoes, and rice also face a reduction under the United States acreage allotment scheme.—*F. A. O. Food and Agricultural Statistics*, December 1949.

FOOD TECHNOLOGISTS OF MANITOBA ORGANIZE

Food technologists of Manitoba have organized under the name of "Manitoba Food Technology Association." This new organization composed of people working directly with the scientific phase of food manufacture, was born during an organizational meeting held in Winnipeg in October, 1949.

At this meeting the following officers were elected:

President—Dr. E. C. Chamberlayne, Provincial Department of Health and Public Welfare.

Vice-President—Mr. A. Lorne Shewfelt, Dominion Experimental Station, Morden.

Secretary—G. W. Andrich, Canada Packers Limited, St. Boniface.

Program Committee Chairman—Dr. E. J. Rigby, City of Winnipeg Health Department; Mr. W. J. Rawlinson, Kraft Food Company; Mr. J. G. Laird, Canada Packers Limited, St. Boniface.

The meeting closed with a description by Mr. Shewfelt of specialized courses available in North America on Food Technology.

SELF-SERVICE MERCHANDISING OF MEATS ANALYZED

Meat sales increased in 46 out of 51 stores that converted their service meat departments to the prepackaged, self-service method of merchandising, and customer reaction to the innovation was good at all but 2 out of 97 self-service stores surveyed, according to a report prepared by the Production and Marketing Administration, U. S. Department of Agriculture.

The study was made under authority of the Research and Marketing Act. It covered costs, packaging methods and materials, merchandising practices, and some of the unsolved problems in selling meat on the self-service basis.

The survey covered 65 chain and 32 independent stores in 80 cities in all sections of the country. Of the stores, 51 had converted from service to self-service, and the remainder had been self-service since opening.

Other factors than the shift to self-service may have been partly responsible for the increased sales, notably the fact that, in making the change, the stores generally modernized their meat departments. However, the volume of sales usually rose after the change and then leveled off at materially greater totals than had been achieved on the service basis; and the number of stores having self-service meat departments rose from about 400 in operation at the time of study to about 1,200 in less than a year.

Acceptance of the new merchandising method by consumers was reported as "enthusiastic" at 67 stores and "moderately enthusiastic" at 28 more, judging by the comments of the customers.

The items on which there were the most reports of increases in sales were luncheon meats, beef steaks, beef roasts, poultry, and specialty products such as heart, liver, brains, and tongue. There were decreases in a few stores in sales of smoked ham, sea foods, pork roasts, and a few other individual items.

The principal reasons given by customers for liking the new method were that it eliminated waiting, provided a better selection of meats, and permitted purchases in amounts to suit the household budget. Those who disliked the self-service system gave as their principal reasons that they missed the personal contact with store personnel and that they preferred to see their meat being cut.

All the fresh meats and the greater part of all other meat items, except frozen meats and frozen poultry, were prepackaged in the stores surveyed, rather than at other points in the marketing channel such as the wholesaler's or packer's plant.

The study showed that total labor costs of the self-service meat departments averaged 4.5 cents per pound of meat handled, or 5.2 cents per package. There was considerable variation in the amount of meat handled per man hour of labor, ranging from an average of 17 pounds per man hour in stores having a weekly sales volume of $2,000 or less, to 29 pounds per man hour in stores with a volume of more than $10,000.

Stores handling the smaller volume of meat had higher labor costs per pound and per package than those with larger volumes. One factor in this was the apparent use of skilled workers in the smaller stores in doing unskilled work. Skilled meat cutters, for example, sometimes were used for such work as wrapping and sealing, where unskilled labor would have been adequate. The proportion of unskilled labor to skilled was higher in the stores with the larger volumes of business, giving an apparently better balanced labor force.

Stores with a weekly volume of more than $10,000 had an average of 76 linear feet of refrigerated display cases, and average weekly sales of $146 per foot. This was about twice the display-case length and four times the sales per linear foot for stores doing a volume of $2,000 and less.

Three-fourths of the retailers reported that fresh beef, veal, pork, and lamb remained in salable condition in display cases for 48 to 72 hours. Most of them said 48 hours was the desirable limit.

Ninety of the 97 stores continued to provide special service for those who asked for it. The most common request was for meat in cuts of different thicknesses from those on display.

The principal problems facing the trade in operating self-service meat departments were reported as follows: (1) Discoloration of the meat, (2) the need for improved packaging techniques, and (3) improving the efficiency of labor.

The report discusses the types of wrapping material used most widely for the different kinds of meats, packaging equipment, spoilage rates, display practices, the ratios of skilled to unskilled labor, wage rates, and other factors affecting this type of merchandising.

Copies of the report are available from the Information Branch of PMA, Washington 25, D. C.

CONFERENCE ON IRRIGATION WATERS

On January 27, 1950, there will be held in El Paso, Texas, a conference on polluted irrigation waters. This meeting is being sponsored jointly by the Environmental Health Study Section, National Institutes of Health, Public Health Service, Federal Security Agency, the El Paso Texas Health Department, and the Texas State Health Department.

The program will be devoted to discussions of general problems on irrigation waters in several western and southwestern states, current research relative to the incidence and behavior of pathogenic organisms in irrigation waters, vegetable washings, and soils, and epidemiological aspects of sewage polluted irrigation waters. In addition, papers will be presented on the utilization of waste water, impounding and use of water of the Rio Grande, machines for vegetable washing, present standards for irrigation water, and use of sewage sludges for soil improvement.

All persons interested in this phase of environmental health are cordially invited to attend the meeting. Copies of the program will be sent at a later date, upon request.

Inquiries should be addressed to Mr. Irving Gerring, Executive Secretary, Environmental Health Study Section, Division of Research Grants and Fellowships, National Institutes of Health, Bethesda 14, Maryland.

If you have doubts about Ac'cent in your food

(as one important food processor had)

He doubted that Ac'cent could improve the flavor of his beef stew. "Our beef stew is as good as we can make it commercially," he said. And his technical staff said the same.

You can try it on the consumer (as he did)

He agreed to test Ac'cent and try it on the public. He ran two batches of beef stew, one with Ac'cent added, one without. He sent to 562 families a can from each batch, and asked them to compare the two.

And find out what he found out (that people will like your food better when a little Ac'cent is added)

Out of the 1995 persons making up those 562 families, 1131 preferred the stew with Ac'cent! Here was the CONSUMER'S answer to this manufacturer's assertion that there was no practical way to improve his product.

Ac'cent is not a flavoring, not a condiment. It adds no flavor, aroma or color of its own. It simply, but wonderfully, brings out—and holds —the natural *flavors of foods. With Ac'cent, you use your own formulas: you prepare as usual—just add Ac'cent.*

Ac'cent is a 99+% pure monosodium glutamate, derived from vegetable sources. A wholesome product of Nature. 100 and 200 lb. drums.

Trade Mark "Ac'cent" Reg. U. S. Pat. Off.

At no obligation to you, we will welcome the opportunity to demonstrate what Ac'cent can do *in one of your own foods*—to pay the cost of a test run in your plant, including payment for the materials used!

Our food technologists will conduct the test. *You* be the judge. Wire or phone for full information.

Ac'cent® makes food flavors sing♪

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